

Firstly, the present invention is an improvement on the system disclosed by applicants US patent no. 6,854,237, granted February 15, 2005. Claim 9, the single independent claim in the case, specifies a sheet-metal upper channel having spaced apart side walls defining an upper channel space between them and an elongated sheet-metal stud, including an upper end portion in the upper channel space and including spaced apart side walls that are contiguous side walls of the upper channel member. Claim 9 continues by specifying that at least one side wall of the upper channel member includes a screw opening and an adjacent side wall of the upper end portion of the stud includes a longitudinal slot. Next, claim 9 calls for a screw having a head outwardly of the opening of the side wall of the upper channel member contiguous the side wall of the upper channel member. The claim then specifies a unique screw construction and a unique relationship of the screw with the hole in the channel member and the slot in the stud. The result of this relationship is that the screw is free of connection with the upper end portion of the stud, allowing the stud to move up and down relative to the screw and the upper channel member, while at the same time sideways forces on the assembly are carried by the screw. As a result, the wall is better able to resist wind loads and other types of side loads that it might encounter.

Claim 9 stands rejected as being obvious under 35 USC § 103(a) from the disclosures of Miller 3,465,488; Gibson 3,066,772 and Osterie 6,428,258.

Miller 3,465,488 discloses a horizontal upper channel 10, a horizontal lower channel 1 and vertical studs 2 extending between the channels 10, 1. Nails 15 are used to connect the sides of the upper channel member 10 to upper end portions of studs 2 and wall board panels 4. Fig 4 of this patent shows a relationship between the nails 15, openings 16 in the upper channel member 10, and wall board panels 4. The patent does not disclose any particular relationships of the nails 15 to the studs 2. Very clearly,

Miller 3,465,488 does not disclose forming vertical slats in the studs 2 and positioning inner end portions of screws in the slots. In the rejection, the Examiner states that Miller discloses a side wall of an upper channel member that includes a fastener opening 16 and an adjacent side wall of an upper end portion of a stud that "includes a slot but not a longitudinal slot." Applicant disagrees with this statement. The upper end portions of the studs 2 in Miller 3,465,488 do not include slots, longitudinal or otherwise. Miller 3,465,488 is most certainly not concerned with making it possible for the channel member 10 and the studs 2 to move up and down relative to each other, the primary objective of the present invention.

The Examiner cites Gibson 3,066,772 which discloses sheet metal studs having narrow nail slots spaced apart throughout the midportion of the stud. The upper and lower ends of the stud are not disclosed. In column 3, lines 54-57, it is stated that the slots are smaller in their minimum or lateral dimension than the diameter or the smallest lateral dimension of the nails, 22 which are employed in conjunction with them." In column 3 starting at line 63, Gibson 3,066,772 states:

Thus, the fastener 22 driven into the side member will pass first through a perforation 21, slightly spreading this perforation as it passes through, and then through the hollow space within the triangular side member, and finally through the perforation 23, slightly spreading this perforation as it passes through. The fastener 22 is held not only by the friction of the distorted metal against its side but the angle of the metal walls 16 and 17 as well as by the sloping portions of the base segment 18 will cause the perforations to become smaller and bite the side of the nail to resist motion that tends to withdraw the nail. Thus, the structure of this invention has gripping action which requires much greater force to remove a fastener than is required to drive it and as a consequence it will forge an extremely firm grip to hold paneling, plaster board or metal lath 25 in place. Through this construction, not only is the nail double locked, once at the base segment 18 and once at the apex, but it may extend any length beyond the apex and thus no critical length of nail is required.

Quite clearly, this patent teaches away from a screw that is free of connection

with a stud where the screw extends through a slot in the stud.

In column 4, lines 15-22, of Gibson 3,066,772 it is stated:

The studs are contemplated as being erected between top and bottom plates and are further contemplated as being secured to the top and bottom plates of metal members which are connected to the plates and are shaped to hold the ends of the stud members securely. It is contemplated that any suitable known and commercially available holding member may be used for this purpose.

Quite clearly, Gibson 3,066,772 does not disclose the "plates." It most certainly does not disclose that by "plates" it means "channel members." There is no disclosure in this patent of upper end portions of studs being positioned in an upper channel member and being secured to the sides of the channel member in a way that allows the studs to move up and down relative to the upper channel member.

The Examiner includes a third reference in the rejection, viz. Osterle et al 6,428,258 B1. This patent relates to a hole-shaping and thread-forming screw. In column 4, starting at line 12, the patent describes the screw that is shown in fig 1 as being "a relatively short screw with a threaded section 4 which follows a cylindrical section 10, and a subsequent, thread-free section 11 which reaches to the engagement section 5. Following the description of the so called "short" screw 1, the patentee states that the same construction can be used with longer screws. However, there is no disclosure of using the screw to connect the side wall of an upper channel member with a slotted end portion of a stud that is positioned at the end of a channel member. There is no disclosure in this patent of an end thread construction at the inner end of the threaded portion which is wider than a slot in a stud so that it will contact the stud on opposite sides of the slot for preventing the screw from moving axially outwardly through the slot.

As pointed out above, a number of individual features in claim 9 are not disclosed

by any of the reference patents that are being used in the rejection. For this reason, there is an insufficient factual basis for combining the references to meet the terms of claim 9. It is submitted that claim 9 is patentable over Miller 3,465,488; Gibson 3,066,772 and Osterle 6,428,258. All three of these patents are directed to problems different than the problem that is addressed by claim 9 and they do not disclose the structural features required to in combination meet the terms of claim 9.

Claim 5 depends from claim 9 and further specifies that the structural wall of claim 9 includes a lower channel member having spaced apart side walls defining a lower channel space between them and specifies that the sheet metal stud includes a lower end portion that is within the lower channel space and is connected to the lower channel member. Accordingly, the combination of claim 5 connects the lower end of the studs to a lower channel member and provides for vertical movement between the upper channel member and slotted upper end portions of studs that are posited in the upper channel member. This combination is neither disclosed by nor obvious from the reference patents.

Claims 2-4 and 6-8 are rejected as being obvious under 35 USC § 103(a) based on Miller 3,465,488; Gibson 3,066,772; Osterle 6,428,258 and Laughlin 5,740,994. It is submitted that each of these claims patentability distinguish over the references. Firstly, the are patentable for the same reasons that claims 9 and 5 are patentable, based on deficiencies of Miller 3,468,488 Gibson 3,066,772 and Osterle 6,428,258. In addition, Claims 2-4 and 6-8 specify that the side walls of the upper channel member each includes a plurality of dimples based apart lengthwise of the side walls, each dimple representing a location that maybe selected to receive a screw fastener that is used to connect a side wall of the upper channel member to the upper end portion of said stud. In the rejection, the examiner states that "Laughlin discloses the importance of antiwist

dimples to strengthen the construction of the stud around the hole of which the screw is inserted. This maybe true, but it is not the location and use of the dimples that is being claimed.

The claims in question specify "a plurality of dimples spaced apart lengthwise of the side walls, each dimple representing a location that maybe selected to receive a screw fastener that is used to connect the side wall of the upper channel member to the upper end portion of said stud." A "plurality of dimples spaced a part lengthwise of the sidewalls" is not the same as antiwrist dimples surrounding a nail or screw hole. Thus, the claimed "dimple" arrangement is a claim feature that is missing from the prior art.

Claims 4 and 8 specify that "the screw fastener has a self-tapping pointed end at its end opposite its head, said self-tapping end being adapted to bore a hole through the base of a selected dimple in response to the screw being rotated while the pointed end is in the dimple." Contrary to what the Examiner states, Osterle 6,428,258 does not disclose a screw fastener having a self-tapping pointed end that when rotated bores a hole in the side wall of the channel member at the location of a dimple. Osterle 6,428,258 discloses an impact screw. As the screw enters the metal 7 end portion 2 and end portion 10 shape the metal to form wall 8 (fig 2). When the screw is rotated, it forms threads in the inner side of the wall 8.

It is submitted that independent claim 9 and dependant claims 2-8 are all directed to a combination of features which are missing from the prior art patents whether individually or in combination. For the reasons set fourth above, it is submitted that claims 5-9 are patentable over the prior art. Early reconsideration of this application,

entry of this Proposed Response, and allowance of the application are requested.

Respectfully submitted,

Mathew Surowiecki

By

A handwritten signature in black ink, appearing to read "Delbert J. Barnard", with a long horizontal flourish extending to the right.

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